

## عنوان مقاله:

Analysis and Design of a 4.8-GHz CMOS Quadrature VCO

## محل انتشار:

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تعداد صفحات اصل مقاله: 4

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## خلاصه مقاله:

In this paper a quadrature VCO is presented that uses superharmonic coupling. This quadrature VCO is suitable for use with both the 2<sup>nd</sup> subharmonic mixer, as well as the 4<sup>th</sup> subharmonic mixer. The presence of harmonics in CMOS VCO circuits is unavoidable. These harmonics are generally unwanted signals that appear with the desired fundamental signal. In differential VCO there exist common-mode nodes (like the two source nodes in a cross-coupled VCO) where higher-order harmonics are present and the fundamental is essentially absent. These second-order harmonics present at the common-mode nodes of two VCO can be used to enforce a quadrature relationship between the fundamental outputs through a technique called superharmonic coupling. This CMOS quadrature VCO using active superharmonic coupling shows very good performance with an output power - 0.942dBm for fundamental and -9.751dBm for subharmonic, phase noise -107.2dBc/Hz for fundamental and -111.8dBc/Hz at a 1MHz offset. All .of circuit Designed and Simulated by ADS2008

## کلمات کلیدی:

Quadrature VCO ,Cross-Couple ,Phase Noise ,CMOS

## لینک ثابت مقاله در پایگاه سیویلیکا:

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